International Journal of Engineering and Advanced Technology (IJEAT)
ISSN: 2249-8958 (Online), Volume-8 Issue-5, June 2019

E-locate: A Room for Rent Locator

Andy A. Lapada

Abstract: ***This study aimed to develop a website that will aid the client in finding rooms, boarding house, apartment for rent and the like. This website compares room rates, can add new account, and a real time update of the status of the availability of rooms. Rapid Application Development (RAD) was utilized which comprises of different phases; planning, analysis, design, and implementation. The system was evaluated using IBM usability scale for software development. Expert testing resulted to 4.63 while end-user testing resulted to 4.64 both can be interpreted as highly usable. Based on the result, it is therefore recommended the utilization of this system.***

Index Terms: ***Room locator, e-room, Room search, e-locate, Room for rent***

I. INTRODUCTION

A website is a collection of related web pages that can be visited using a web browser. A website can be a tool for the companies that will allow them to get in touch with millions of web surfers all over the world. A website will make the company's business look more reliable if they are represented in a professional way. It also give businesses the chance to portray themselves in ways they want to be seen, with a platform that's built on their terms and can effectively market the services or products they offer.

Because of websites ability to reach people around the world, industries such as hotels, apartment, boarding houses, room for rent and the likes utilized the advantage of using this technology.

According to Signh (2015)[1], the most popular app for hunting a house is Hosing.com. With the help of this app, one can post a flat for sale, find a new apartment to rent or buy, search for a hostel, and look up new localities. This app has detailed data and pictures of every property. One can use filter and search every specific detail needed.

An example of a website that offers room, space, apartment or house is Airbnb. It is free to create a listing. The host decides how much to charge per night, per week or per month. Each listing allows hosts to promote properties through titles, descriptions, photographs with captions and a user profile where potential guests can get to know a bit about the hosts (Guttentag, 2015)[2].

Hot pads at hotpads.com focuses on regency of the listing of new apartments registered to the system as top search when user navigates through the system (Zillow, 2005)[3].

Manuscript published on 30 June 2019.
***** Correspondence Author (s)
Andy A. Lapada, Department of Information Technology, Eastern Samar State University, Philippines

In the Philippines, there is a mobile application called Board Me App that locate the nearest available boarding houses in Manila. It uses Global Positioning System (GPS) to locate and display its geographical information and other important details including the contact information of the owner (Abella et.al, 2017)[4].

In the case of Borongan City in Eastern Samar, Philippines, it is still a problem in finding or locating the closest boarding houses. That is why the researcher took this opportunity in developing a website that can help in finding rooms for rent based on the needs of the customer.

II. OBJECTIVES OF THE STUDY

This study aimed to develop an online way of searching room for rent. Specifically, this study aimed to develop a website that:

1. Allows the user to search boarding houses, apartment and the like based on their needs;
2. Compare room rates;
3. Add new account (boarding house owner and clients);
4. Real-time update of the status and the availability of rooms;
5. Evaluate the system using IBM usability evaluation tool as an intermediary questionnaire

III. RESEARCH METHODOLOGY

Rapid Application Diagram (RAD) is an object-oriented approach to systems cycle that includes a method of development as well as software tools (Kendal and Kendall 2005).

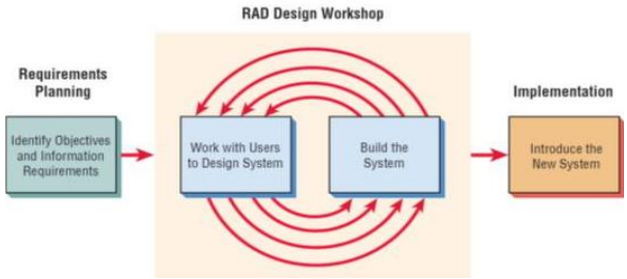

Figure 1. Rapid Application Development (Kendal & Kendall, 2005)

Figure 1 shows the step by step process of the method used by the researcher to develop the system.

Research Design

This study has been subjected to an evaluation testing. The researcher used developmental-evaluated design to test the system acceptability.

Instrumentation

The questionnaire utilized to evaluate the system was based on IBM Software Usability Scale. It serves as a framework or model for providing worldwide acceptable software qualities required for software evaluation. Under this standard.

Mean

This is the average of the scores - the mathematical center of a distribution. It used symmetrical, unimodal distributions of interval or ration scores. The formula for mean is:

Where:

Percentage

It defines as the part of expressed in hundredths. The formula for percentage is:

$$P = (n/t) \times 100$$

Where:

P = percentage n = number t = total number of respondents

Coding Scheme

Level of Agreement	Adjectival Rating
5	Strongly Agree
4	Agree
3	Slightly Agree
2	Slightly Disagree
1	Disagree

For Acceptance Testing

The obtained mean was interpreted using the following:

Numerical Rating Scale	Adjective Rating
4.2 – 5.0	Highly Usable
4.19 – 3.4	Usable
3.39 – 2.6	Moderately Usable
1.8 – 2.59	Moderately Unusable
1.0 – 1.79	Highly Unusable

Output and Graphical User Interface (GUI)

This part of the documentation shows the research output and User Interface of the website.

Figure 2. Home page of the website

Figure 2 allows the user to search boarding houses, apartment, rooms and the like.

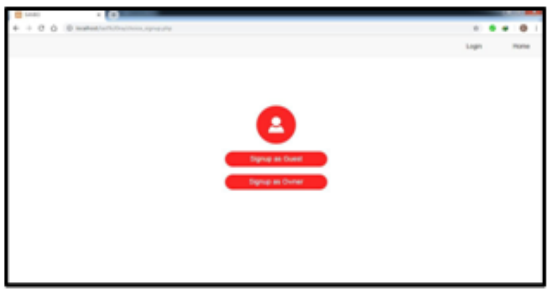

Figure 3. User Signup page

Figure 3 show that the user can create an account as an owner or as a customer

Figure 4. Room comparison

Figure 4. This page shows the description and comparison of the different rooms available for rent.

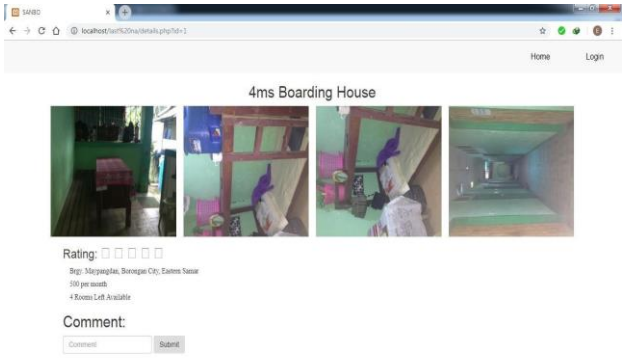

Figure 5. Rooms availability

Figure 5 show real-time update of the status and the availability of rooms.

IV. RESULTS AND DISCUSSIONS

In order to gauge the acceptability of the website, alpha and beta testing were conducted. A total of fourteen experts and 32 end-users evaluated the system. this section presents the result of the system tested and evaluated to determine the usability using the Software Quality Evaluation Tool based on IBM Computer-System Usability Scale. The following are the result of the expert and end-user testing.

Table 1. Weighted Mean and Interpretation (Expert Testing)

QUESTION	WEIGHTED MEAN	ADJECTIVAL INTERPRETATION
Overall, I am satisfied with how easy it is to use this system	4.5	Highly Usable
Overall, I am satisfied with how easy it is to use this system	4.3	Highly Usable
I can effectively complete the tasks using this system	4.6	Highly Usable
I am able to complete my work quickly using this system	4.5	Highly Usable
I feel comfortable using this system	4.6	Highly Usable
It was easy to learn to use this system	4.7	Highly Usable
Whenever I make a mistake using the system, I recover easily and quickly	4.7	Highly Usable
The organization of information on the system screens is clear	4.8	Highly Usable
The interface of this system is pleasant	4.6	Highly Usable
I like using the interface of this system	4.8	Highly Usable
Overall, I am satisfied with how easy it is to use this system	4.9	Highly Usable
GRAND MEAN	**4.63**	**Highly Usable**

Published By:
Blue Eyes Intelligence Engineering
& Sciences Publication (BEIESP)

Table 1 shows the grand mean of 4.63 interpreted as highly usable. It can be inferred that experts rated all questions as highly usable. This result shows that the system is following standard based on its usability. With the over-all result of 4.63 interpreted as Highly Usable, the system adhered to the IBM standard.

Table 2. Weighted Mean and Interpretation (End-User Testing)

QUESTION	WEIGHTED MEAN	ADJECTIVAL INTERPRETATION
Overall, I am satisfied with how easy it is to use this system	4.7	Highly Usable
Overall, I am satisfied with how easy it is to use this system	4.8	Highly Usable
I can effectively complete the tasks using this system	4.6	Highly Usable
I am able to complete my work quickly using this system	4.4	Highly Usable
I feel comfortable using this system	4.7	Highly Usable
It was easy to learn to use this system	4.6	Highly Usable
Whenever I make a mistake using the system, I recover easily and quickly	4.8	Highly Usable
The organization of information on the system screens is clear	4.8	Highly Usable
The interface of this system is pleasant	4.4	Highly Usable
I like using the interface of this system	4.5	Highly Usable
Overall, I am satisfied with how easy it is to use this system	4.7	Highly Usable
GRAND MEAN	**4.64**	**Highly Usable**

.

Table 2 revealed the overall mean of 4.64 interpreted as highly usable. Based on this result, the system passed the IBM standard on system usability.

V. CONCLUSION

Conclusions

Based on the results, the researcher came up with the following conclusions:

1. The researcher were able to create a website that allows the user to search boarding houses, apartment and the like according to their needs;
2. The system can compare room rates;
3. The system can also add new account (owner and clients);
4. The system can show the real-time update of the status and the availability of the rooms;
5. The result shows that both expert and end-user testing got a high score during testing. 4.63 and 4.64 respectively were the result which can be interpreted as highly usable.

Based on the overall result, it is very safe to say that the developed website passed the IBM standard for software development.

RECOMMENDATION

After a thorough analysis of the study, the researcher recommends the utilization of this website in order to provide assistance to those people who are in need of different apartments or rooms for rent.

REFERENCES

1. CONSIGNADO, Mark Lloyd Lester S et al. HAYBOL: An Android-Based Apartment Locator Application. **International Journal of Computing Sciences Research**
2. Daniel Guttentag. (2015) Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism* 18:12, pages 1192-1217
3. Zillow Group, Matt, Douglas, John. (2005). About Hotpadds. Retrieved from http://hotpadds.com /pages/about-us.html
4. M. P. Abella, L. M. Pecdasen, G. G. R. Fajardo, L. G. Pascual and M. N. Jamis, "Board me app: A mobile application for finding boarding houses in university belt," *TENCON 2017 - 2017 IEEE Region 10 Conference*, Penang, 2017, pp. 828-832.

Authors Profile

Andy A. Lapada has a Bachelor's Degree in Information Technology. He was also graduated with his masters in Information Technology in 2011 and his PhD in Technology Management in 2016. Currently he is working as a College Instructor and designated as a Program Head of the BS Information Technology Program of Eastern Samar State University. His interests includes GIS, MIS, Web development and software evaluation.